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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,718	09/22/2000	Hyun Chang Lee	8733.270	9395

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MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 12/04/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

ARG

PRG

# Office Action Summary

Application No.  
**09/667,718**

Applicant(s)  
**Lee et al.**

Examiner  
**Fritz Alphonse**

Art Unit  
**2675**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Sep 22, 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
2. Claims 1-11, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuo (U.S. Pat. No. 6,236,385).

As to claim 1, Matsuo (figs. 1, 12) teach about a method of driving a liquid crystal display device having a plurality of liquid crystal cells disposed in a matrix of rows and columns, the method comprising: scanning the rows of liquid crystal cells in the liquid crystal display device sequentially (col.1, lines 24-43); and subsequently, resetting each liquid crystal cell of the liquid crystal display device simultaneously (col. 4, lines 27-40).

As to claim 2, Matsuo (figs. 12, 13) shows a method, wherein resetting each liquid crystal cell of the liquid crystal display device simultaneously comprises applying a reset voltage to a common electrode (note in figure 12, a reset voltage applied to the common electrode 8) of the liquid crystal display device (col. 8, lines 56 through col. 9, line 23).

As to claim 3, Matsuo (fig. 12) teaches about a method comprises simultaneously applying a reset voltage to a gate electrode line of each liquid crystal cell (col. 9, lines 2-14).

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As to claim 4, Matsuo (fig. 12) teaches about a method of resetting a liquid crystal display device, wherein a reset voltage is applied to all liquid crystal cells of the liquid crystal display device to reset the liquid crystal display device (col. 4, lines 27-40).

As to claims 5-6, Matsuo (fig. 12) teaches about a method, wherein the reset voltage is applied to a common electrode of the liquid crystal display device, and wherein the reset voltage applied to the common electrode is less than a common voltage applied to the common electrode in a data charging interval (col. 8, lines 56 through col. 9, line 23; fig. 13; col.8, lines 47-67).

As to claims 7-8, the claims have substantially the limitations of claim 3. Therefore, they are analyzed as previously discussed in claim 3 above.

As to claim 9, the claim has substantially the limitations of claims 1-3, therefore, it is analyzed as previously discussed in claims 1-3 above.

As to claim 10, Matsuo (figs. 12 and 15) shows a reset circuit for a liquid crystal display device, comprising: a voltage amplifier (note the voltage applied to input 54 is amplified by transistor 60) for amplifying an input control signal having a specific logical state only in a reset interval when liquid crystal cells of the liquid crystal display device are reset, the amplified input control signal to be applied to a common electrode of the liquid crystal display device (col. 10, lines 3-10).

As to claim 11, Matsuo (fig. 13) shows a reset circuit, wherein the voltage amplifier outputs a normal common electrode voltage in an interval when a data voltage is charged and maintained in

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the liquid crystal cells, and outputs a reset voltage less than the normal common electrode voltage in the reset interval (fig. 13; col.8, lines 47-67).

As to claims 15-17, the claims have substantially the limitations of claims 1-2, therefore, they are analyzed as previously discussed in claims 1-2 above.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo in view of Berting (U.S. Pat. No. 4,393,379).

As to claim 12, Nomura discloses a reset circuit for a liquid crystal display device. Nomura fail to teach about a shift register, logical OR gates for performing a logical OR operation of an input reset signal and each gate driving signal from the shift register; and level shifters. However, these limitations are disclosed by Matsuo (see figures 1, 2; col. 2, line 55 through col. 3, line 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve upon the non-multiplexed LCD drive circuit, as disclosed by Berting.

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Doing so would provide a low cost LCD drive circuit that is suitable for instrumentation applications.

As to claim 13, the claim has substantially the limitations of claim 12, therefore, it is analyzed as previously discussed in claim 12 above.

As to claim 14, Nomura does not teach about a reset circuit included in a gate driving integrated circuit. However, this limitation is disclosed by Berting (fig. 1; col. 3, lines 56-68). See the motivation above.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaka et al. (U.S. Pat. No. 5,594,464) discloses a high speed multiplex-driven liquid crystal device having two metastable states.

Masazumi (U.S. Pat. No. 6,414,669) discloses a driving method and apparatus for liquid crystal display device.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks


Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 ( for Technology Center 2600 only )**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
F. Alphonse

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November 29, 2002

  
STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600